STATE OF MARYLAND
DHMH
Maryland Department of Health and Mental Hygiene
Larry Hogan, Governor - Boyd K. Rutherford, Lt. Governor - Dennis R. Schrader, Secretary

December 30, 2016

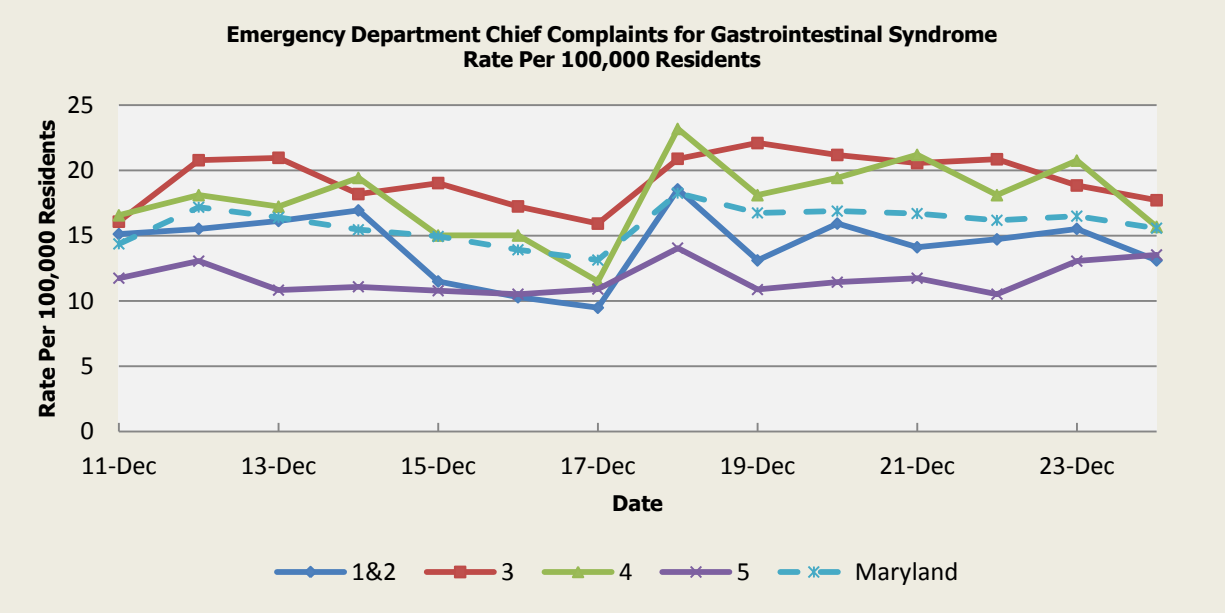
Public Health Preparedness and Situational Awareness Report: #2016:51 Reporting for the week ending 12/24/16 (MMWR Week #51)

CURRENT HOMELAND SECURITY THREAT LEVELS
National: **No Active Alerts**
Maryland: **Level Four (MEMA status)**

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

Graphical representation is provided for all syndromes (excluding the "Other" category; see Appendix 1) by Health and Medical Regions (See Appendix 2). Emergency department chief complaint data is presented as rates per 100,000 residents using data from the 2010 census.



There were ten (10) gastroenteritis outbreaks reported this week: four (4) outbreaks of gastroenteritis in Nursing Homes (Regions 3,4,5); three (3) outbreaks of gastroenteritis in Assisted Living Facilities (Region 3); one (1) outbreak of gastroenteritis in a Hospital (Region 3); one (1) outbreak of gastroenteritis in a Shelter (Region 3); one (1) outbreak of gastroenteritis in a Residential Treatment Facility (Region 3).

	Gastrointestinal Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	12.94	14.88	15.42	10.31	13.01
Median Rate*	12.70	14.47	14.80	10.17	12.75

* Per 100,000 Residents

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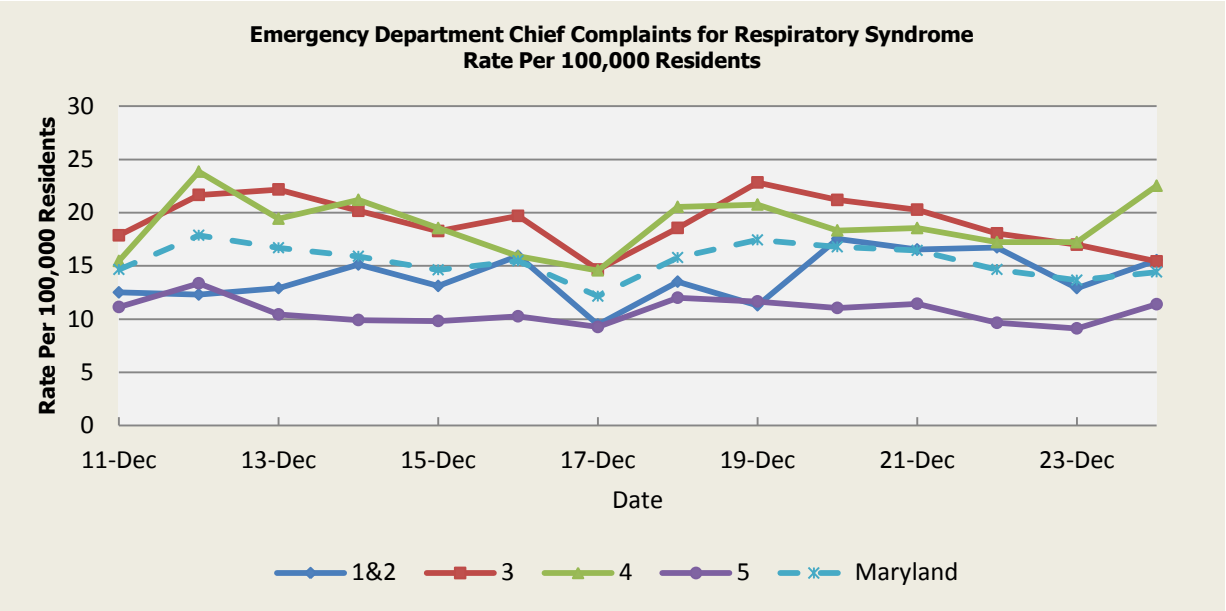
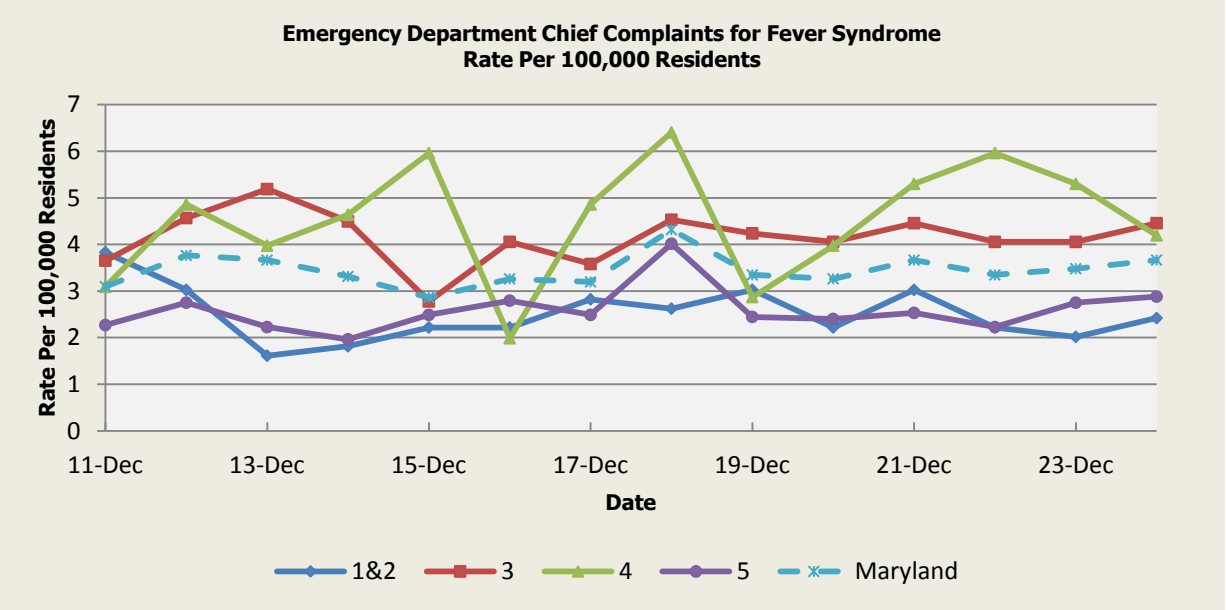


There were four (4) respiratory illness outbreaks reported this week: one (1) outbreak of Influenza in a Nursing Home (Regions 1&2); one (1) outbreak of Influenza Like Illness in an Institution (Region 3); one (1) outbreak of Pneumonia in an Assisted Living Facility (Regions 1&2); one (1) outbreak of Legionellosis in an Independent Living Facility (Regions 1&2).

	Respiratory Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	11.99	14.12	14.04	9.94	12.34
Median Rate*	11.70	13.37	13.69	9.52	11.79

* Per 100,000 Residents



There were no fever outbreaks reported this week.

	Fever Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	3.07	3.80	3.93	3.09	3.48
Median Rate*	3.02	3.62	3.75	2.97	3.35

Per 100,000 Residents

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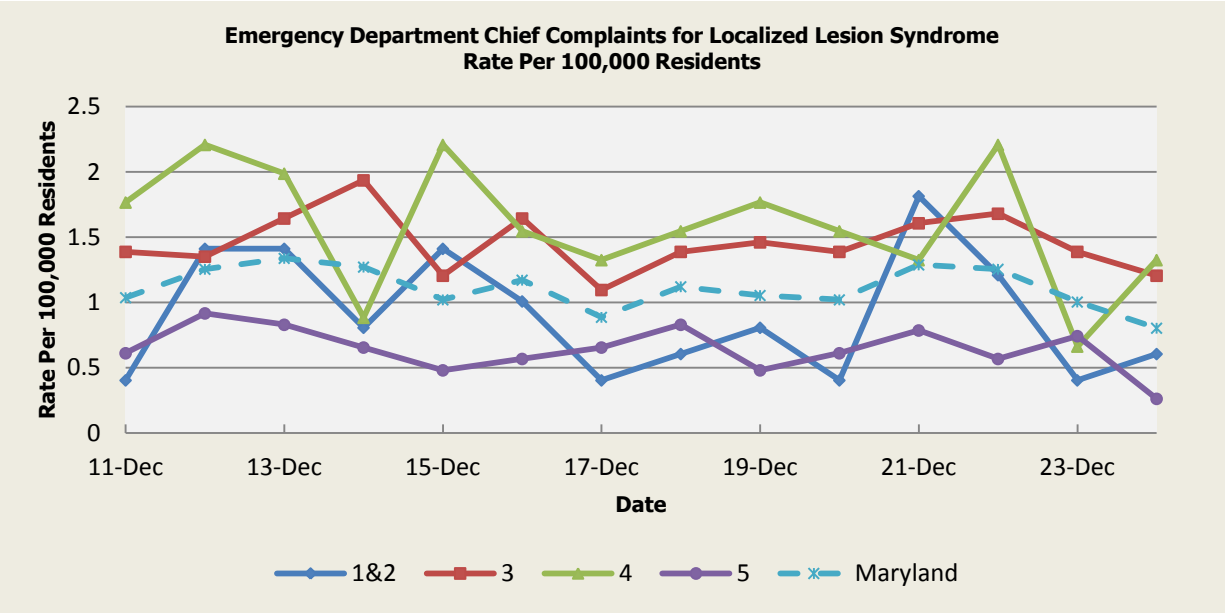
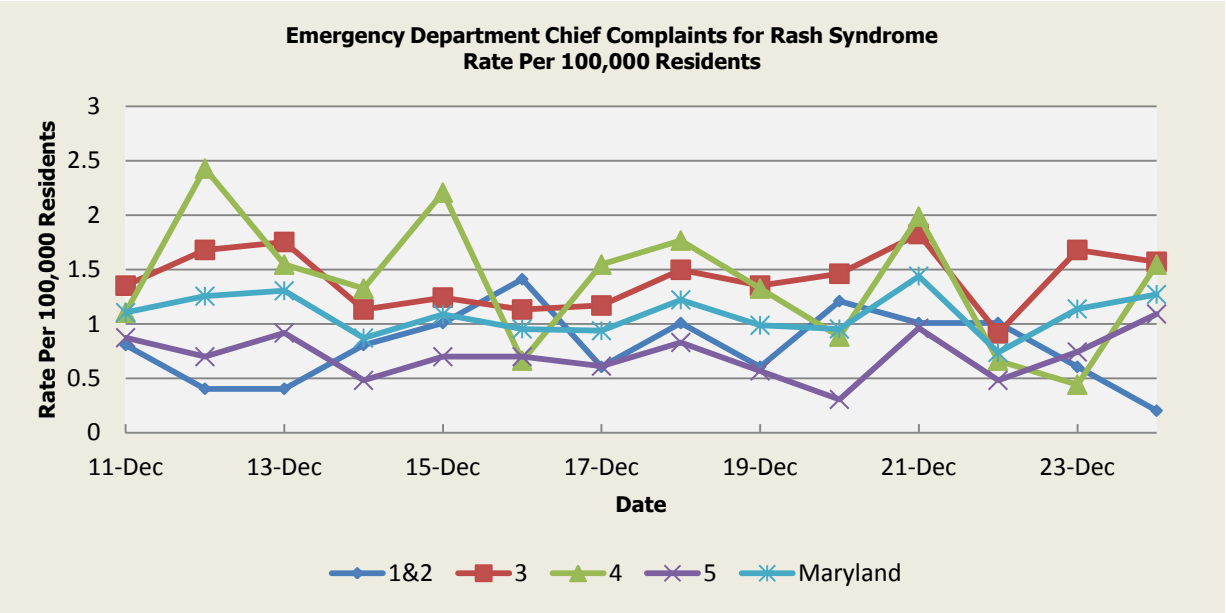


There were no localized lesion outbreaks reported this week.

	Localized Lesion Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	1.07	1.91	2.03	0.98	1.49
Median Rate*	1.01	1.86	1.99	0.92	1.44

* Per 100,000 Residents



There were no rash illness outbreaks reported this week.

	Rash Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	1.30	1.75	1.75	1.04	1.44
Median Rate*	1.21	1.68	1.77	1.00	1.39

* Per 100,000 Residents

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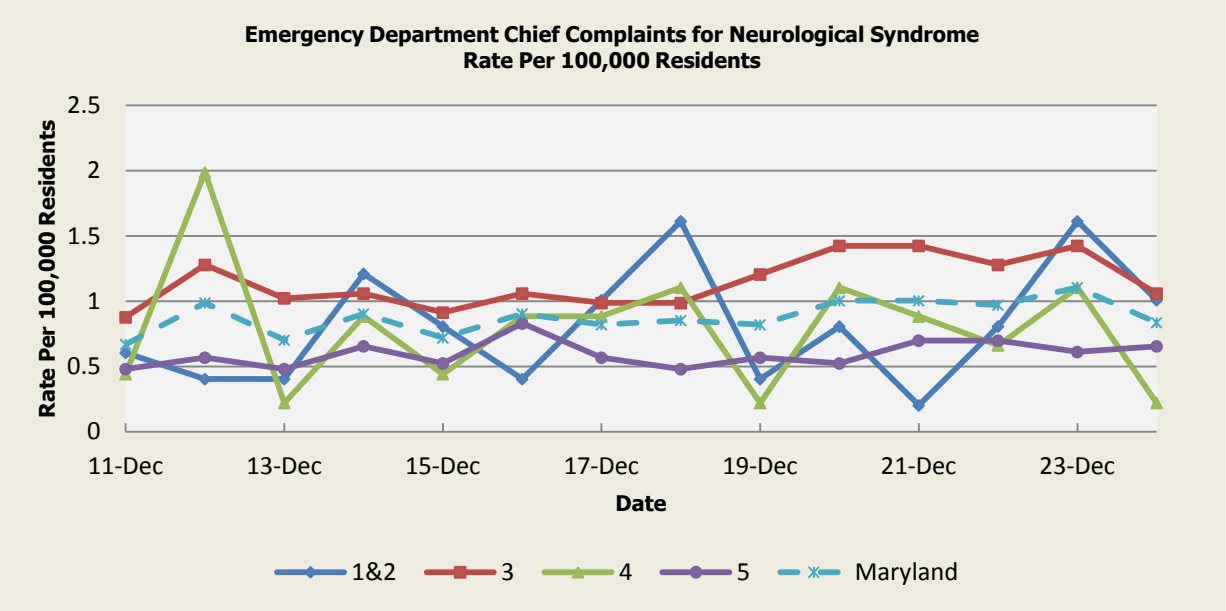
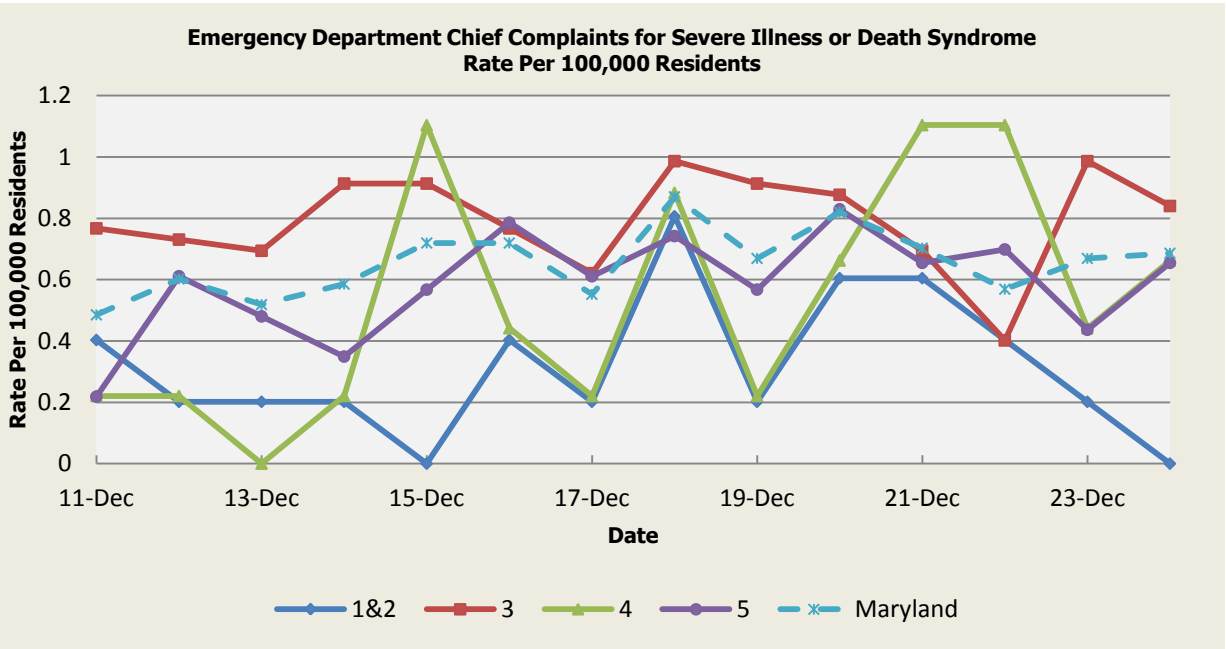


There were no neurological syndrome outbreaks reported this week.

	Neurological Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.63	0.73	0.65	0.48	0.62
Median Rate*	0.60	0.66	0.66	0.44	0.57

* Per 100,000 Residents



There were no severe illness or death outbreaks reported this week.

	Severe Illness or Death Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.70	0.95	0.84	0.44	0.73
Median Rate*	0.60	0.91	0.88	0.44	0.72

* Per 100,000 Residents

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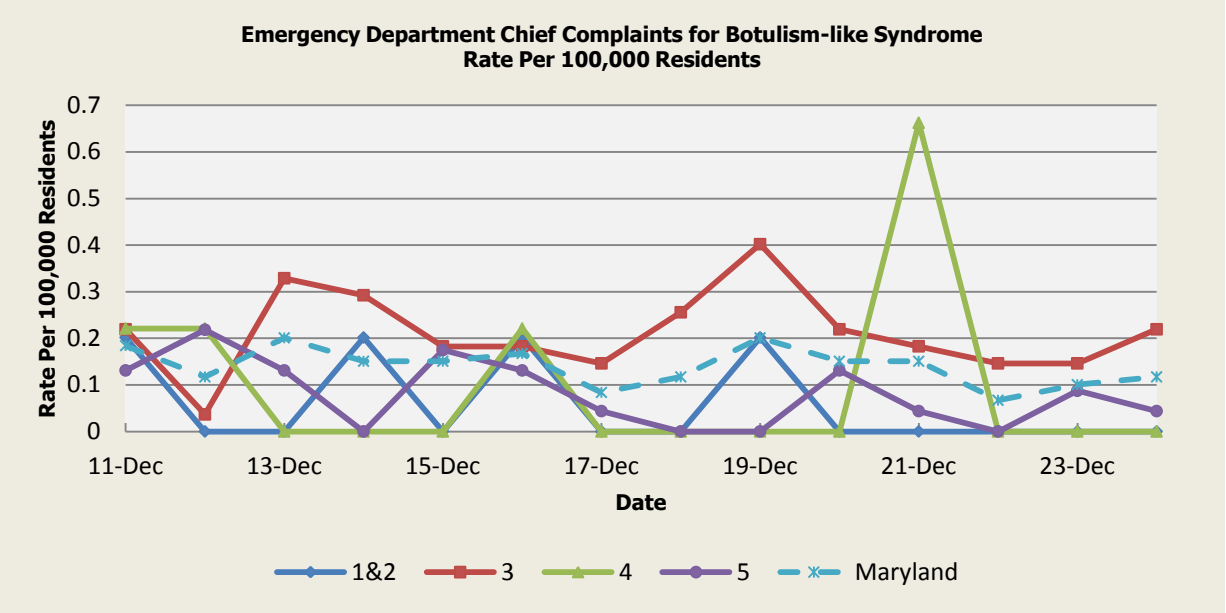
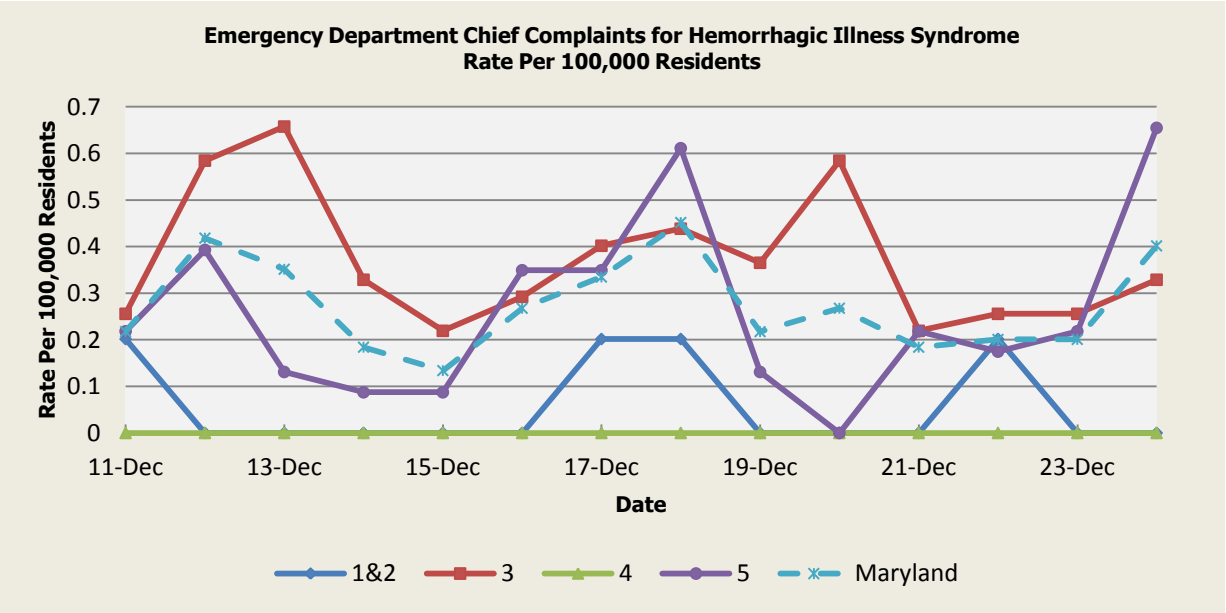
SYNDROMES RELATED TO CATEGORY A AGENTS



There was an appreciable increase above baseline in the rate of ED visits for Botulism-like Syndrome on 12/11 (Regions 1&2,3,4,5), 12/12 (Regions 4,5), 12/13 (Regions 3,5), 12/14 (Regions 1&2,3), 12/15 (Regions 3,5), 12/16 (Regions 1&2,3,4,5), 12/18 (Region 3), 12/19 (Regions 1&2,3), 12/20 (Regions 3,5), 12/21 (Regions 3,4), and 12/24 (Region 3). These increases are not known to be associated with any outbreaks.

	Botulism-like Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.06	0.08	0.04	0.05	0.06
Median Rate*	0.00	0.04	0.00	0.04	0.05

* Per 100,000 Residents



There was an appreciable increase above baseline in the rate of ED visits for Hemorrhagic Illness Syndrome on 12/11 (Regions 1&2,3,5), 12/12 (Regions 3,5), 12/13 (Region 3), 12/14 (Region 3), 12/15 (Region 3), 12/16 (Regions 3,5), 12/17 (Regions 1&2,3,5), 12/18 (Regions 1&2,3,5), 12/19 (Region 3), 12/20 (Region 3), 12/21 (Regions 3,5), 12/22 (Regions 1&2,3,5), 12/23 (Regions 3,5) and 12/24 (Regions 3,5). These increases are not known to be associated with any outbreaks.

	Hemorrhagic Illness Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.03	0.11	0.03	0.08	0.08
Median Rate*	0.00	0.04	0.00	0.04	0.03

* Per 100,000 Residents

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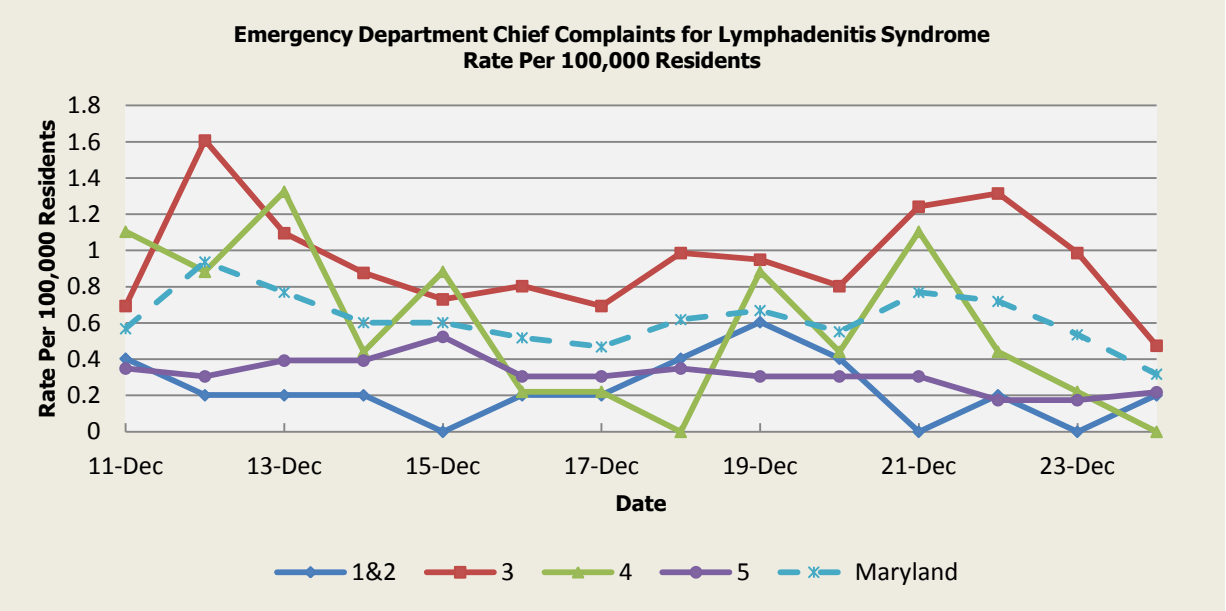

There was an appreciable increase above baseline in the rate of ED visits for Lymphadenitis Syndrome on 12/11 (Region 4), 12/12 (Regions 3,4), 12/13 (Regions 3,4), 12/15 (Region 4), 12/18 (Region 3), 12/19 (Regions 3,4), 12/21 (Regions 3,4), 12/22 (Region 3), and 12/23 (Region 3). These increases are not known to be associated with any outbreaks.

	Lymphadenitis Syndrome Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	0.31	0.51	0.34	0.31	0.40
Median Rate*	0.20	0.37	0.22	0.26	0.33

* Per 100,000 Residents

MARYLAND REPORTABLE DISEASE SURVEILLANCE

	Counts of Reported Cases‡					
Condition	**December**			**Cumulative (Year to Date)****		
Vaccine-Preventable Diseases	**2016**	**Mean***	**Median***	**2016**	**Mean***	**Median***
Aseptic meningitis	13	30.4	31	343	463	468
Meningococcal disease	0	0.2	0	3	7	5
Measles	0	0	0	4	4.6	3
Mumps	2	1.4	0	22	39.4	19
Rubella	0	0	0	1	2.4	2
Pertussis	13	30.6	31	252	320	368
Foodborne Diseases	**2016**	**Mean***	**Median***	**2016**	**Mean***	**Median***
Salmonellosis	17	33.4	31	792	900.8	908
Shigellosis	4	8.2	5	139	179.8	220
Campylobacteriosis	17	36.2	35	723	691.4	687
Shiga toxin-producing Escherichia coli (STEC)	2	6.4	7	187	124.6	113
Listeriosis	1	0.6	0	21	17	16
Arboviral Diseases	**2016**	**Mean***	**Median***	**2016**	**Mean***	**Median***
West Nile Fever	0	0.2	0	2	12	10
Lyme Disease	35	48.6	45	1851	1459.2	1552
Emerging Infectious Diseases	**2016**	**Mean***	**Median***	**2016**	**Mean***	**Median***
Chikungunya	1	1	0	7	17.2	0
Dengue Fever	0	0.8	0	41	17	17
Zika Virus***	0	0.2	0	132	0.4	0
Other	**2016**	**Mean***	**Median***	**2016**	**Mean***	**Median***
Legionellosis	8	9.6	10	153	167.8	171

‡ Counts are subject to change *Timeframe of 2011-2015 **Includes January through current month

*** As of December 30, 2016, the total Maryland Confirmed and Probable Cases of Zika Virus Disease and Infection is 158.

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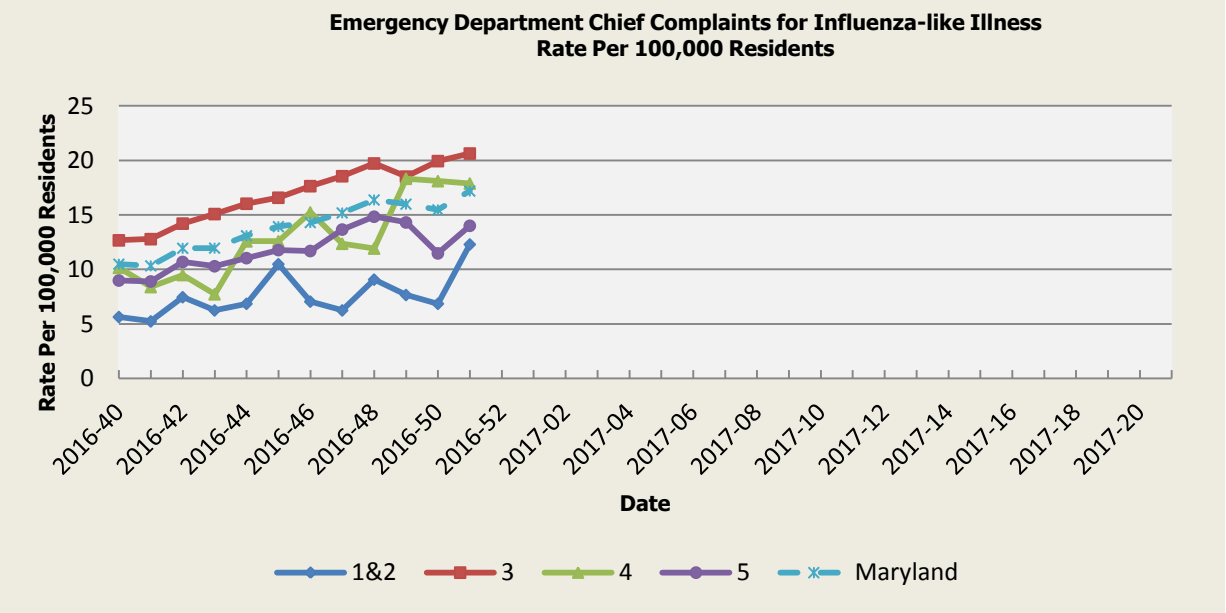
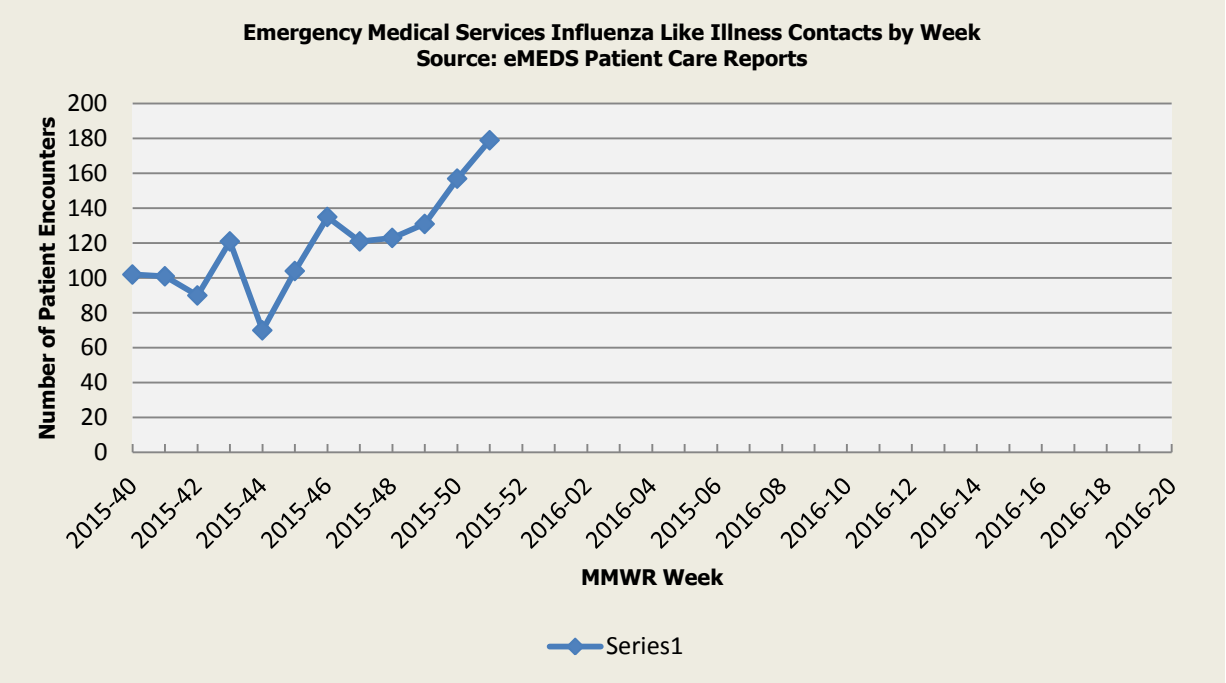
SYNDROMIC INFLUENZA SURVEILLANCE

Seasonal Influenza reporting occurs from MMWR Week 41 through MMWR Week 20 (October through May). Seasonal Influenza activity for Week 51 was: Local Geographic Spread with Minimal Intensity.



	Influenza-like Illness Baseline Data Week 1 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	9.26	11.58	10.78	10.43	10.88
Median Rate*	7.66	8.99	9.05	8.03	8.72

* Per 100,000 Residents



Disclaimer on eMEDS flu related data: This data is based on EMS Pre-hospital care reports where the EMS provider has selected "flu like illness" as a primary or secondary impression of a patient's illness. This impression is solely based on the signs and symptoms seen by the provider, not on any diagnostic tests. Since these numbers do not include all primary or secondary impressions that may be seen with influenza the actual numbers may be low. This data is reported for trending purposes only.

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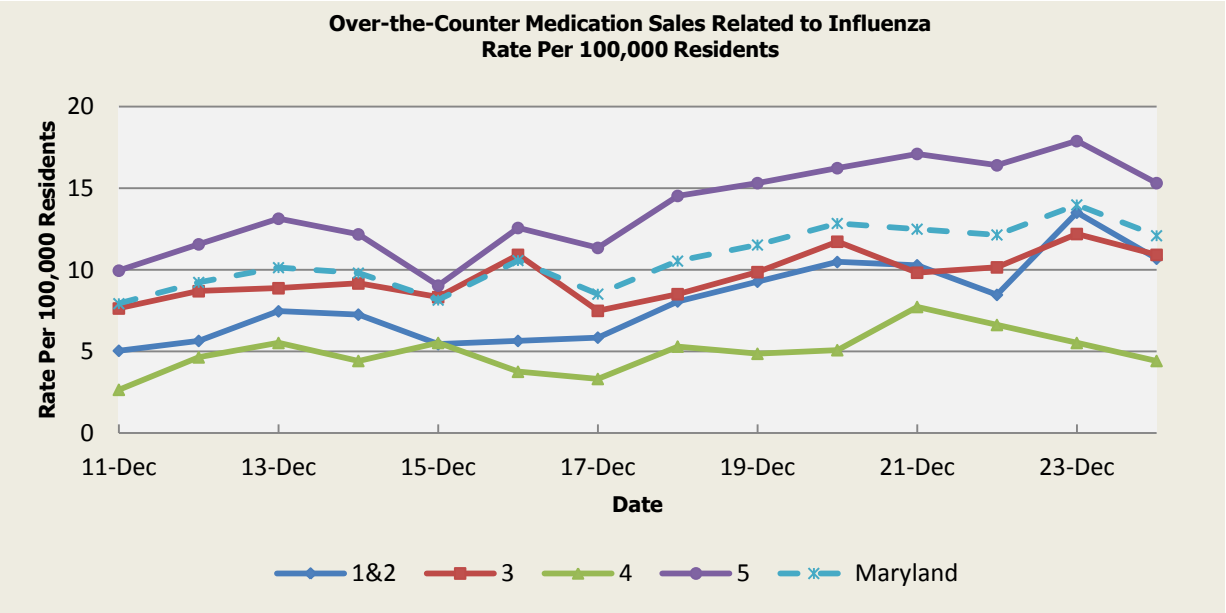
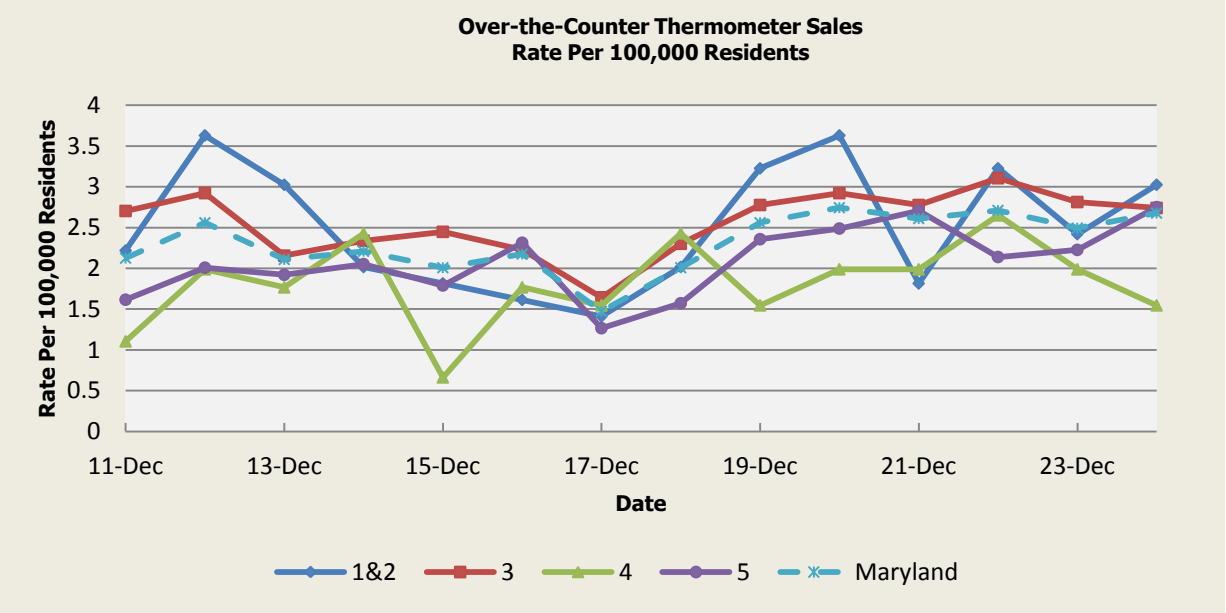


There was an appreciable increase above baseline in the rate of OTC medication sales on 12/13 (Regions 1&2,4), 12/14 (Regions 1&2), 12/15 (Region 4), 12/15 (Region 4), 12/16 (Region 3), 12/18 (Regions 1&2,4), 12/19 (Regions 1&2,3), 12/20 (Regions 1&2,3), 12/21 (Regions 1&2,3,4,5), 12/22 (Regions 1&2,3,4), 12/23 (Regions 1&2,3,4,5) and 12/24 (Regions 1&2,3). These increases are not known to be associated with any outbreaks.

	OTC Sales Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	3.86	4.69	2.60	8.21	5.79
Median Rate*	2.82	3.98	2.21	7.60	5.19

* Per 100,000 Residents



There was not an appreciable increase above baseline in the rate of OTC thermometer sales this week.

	Thermometer Sales Baseline Data January 1, 2010 - Present				
Health Region	1&2	3	4	5	Maryland
Mean Rate*	3.48	3.30	2.54	4.50	3.72
Median Rate*	3.23	3.07	2.43	4.10	3.46

* Per 100,000 Residents

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PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is ALERT. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

Influenza A (H7N9) is one of a subgroup of influenza viruses that normally circulate among birds. Until recently, this virus had not been seen in people. However, human infections have now been detected. As yet, there is limited information about the scope of the disease the virus causes and about the source of exposure. The disease is of concern because most patients have been severely ill. There is no indication thus far that it can be transmitted between people, but both animal-to-human and human-to-human routes of transmission are being actively investigated.

Alert phase: This is the phase when influenza caused by a new subtype has been identified in humans. Increased vigilance and careful risk assessment, at local, national and global levels, are characteristic of this phase. If the risk assessments indicate that the new virus is not developing into a pandemic strain, a de-escalation of activities towards those in the interpandemic phase may occur. As of December 19, 2016, the WHO-confirmed global total (2003-2016) of human cases of H5N1 avian influenza virus infection stands at 856, of which 452 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 53%.

Human Avian Influenza:

H7N2 AVIAN INFLUENZA, HUMAN (USA – NEW YORK): 25 Dec 2016, On 22 Dec, New York City Health Officials report that a vet at a New York City animal shelter where cats were infected with a strain of bird flu has also been infected. The vet showed mild illness from the H7N2 virus and has since recovered the health department reported. "Since last week [week of 12 Dec 2016], more than 100 cats have tested positive for H7N2 across all NYC shelters," the department said. "This was expected because the virus is highly contagious among cats and cats are sometimes moved between shelters. All of the newly infected cats are experiencing mild illness and have been separated from other animals in the shelters. They are expected to recover." Read more: http://www.promedmail.org/post/4718525

H7N9 AVIAN INFLUENZA, HUMAN (CHINA): 25 Dec 2016, Hong Kong authorities have confirmed the first human bird flu infection for this season [2016-17] after an elderly man who had recently traveled to mainland China was diagnosed with the deadly H7N9 virus strain. The 75-year-old male patient, who had visited the southern Chinese town of Changping in Dongguan city this month [December 2016] before returning to Hong Kong, is in serious condition, the government said in a statement released late on Monday, 19 Dec 2016. Hong Kong has been battling sporadic cases of avian influenza in humans since the first outbreak killed 6 people in the Asian financial hub in 1997. Read More: http://www.promedmail.org/post/4718639

NATIONAL DISEASE REPORTS

MUMPS (USA – MISSOURI, ARKANSAS, TEXAS,): 26 Dec 2016, As of now, roughly 200 cases of infected individuals have been confirmed by the University of Missouri in Columbia. The mumps outbreak that has been sweeping through various regions across Missouri lately has spread to Kansas City, as well, according to health officials. At the moment, health agencies state that at least one case of an individual displaying mumps symptoms has been confirmed, says the Kansas City Health Department. As a consequence, an advisory has been issued on Thursday afternoon [22 Dec 2016]. --- According to health officials, an epidemic of mumps is seriously affecting a community of citizens of the Marshall Islands residents of northwest Arkansas. Citizens of the Marshall Islands represent approximately 60 percent of the 2220 cases of mumps reported in the state through [Fri 23 Dec 2016]. The Arkansas Democrat-Gazette newspaper reported that the outbreak began in August 2016 (http://bit.ly/2hVVQYf). The Marshallese population in Northwest Arkansas has been especially hard-hit. About 60 percent of the region's cases have affected people in that community. --- Texas state health officials are investigating two (2) mumps outbreaks, one of which is connected to a series of

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cheerleading competitions in North Texas. The Texas Department State Health Services [DSHS] is working with event organizers to notify those who attended 1 of 4 cheerleading competitions in November and December [2016] that they may have been exposed to mumps. DSHS said it has identified 11 mumps cases associated with this outbreak. A second outbreak is being investigated in Johnson County, south of Fort Worth. Health officials have identified 72 cases in this outbreak, including 71 Johnson County residents and 1 Tarrant County resident. DSHS is working with school districts in the area to limit its spread since most of the cases are in students. Read more: http://www.promedmail.org/post/4723331

PERTUSSIS (CALIFORNIA): 18 Dec 2016, Cases of whooping cough are affecting some Palo Alto [California] middle and high school students, prompting school officials to send students with any type of cough home and to the doctor for testing, a school district spokesman said this week. The highly contagious disease has been confirmed in students at three (3) schools: Jordan Middle School and Palo Alto and Gunn high schools. Students who have already been vaccinated have been confirmed with whooping cough, underlining the importance of receiving booster shots since the shot does not provide lifetime immunity. Read More: http://www.promedmail.org/post/4706211

MYCOBACTERIUM ABSCESSUS (CALIFORNIA): 14 Dec 2016, Orange County's public health officer ordered another shutdown Friday [16 Dec 2016] of the Children's Dental Group of Anaheim [California], where dozens of children were affected by a bacterial outbreak. On 15 Sep [2016], the dental office was ordered to stop conducting pulpotomy procedures and replace its internal water processing system. When that job was completed, the ban was lifted 7 Nov [2016]. Test results Thursday [15 Dec 2016], however, showed there was *Mycobacterium* in the office's internal water system, and as of Tuesday [13 Dec 2016], county health officials said they had logged 58 cases involving the clinic, with 20 confirmed to be infected and the rest probably infected. All 58 have been hospitalized at least once at some point. They range in age from 2 to 10 [years] and underwent procedures from March through 11 Aug [2016]. Read more: http://www.promedmail.org/post/4706109

INTERNATIONAL DISEASE REPORTS

CHIKUNGUNYA (PAKISTAN): 26 Dec 2016, on Wed 21 Dec 2016, Epidemiologists have linked the outbreak of chikungunya in Karachi [Sindh] with its outbreak in India a few months ago. Last week, 3 of the 5 cases reported in Karachi's Malir area tested positive for chikungunya, a viral disease transmitted to humans by infected mosquitoes. Chikungunya was notified for the first time by the World Health Organization (WHO) after 3 patients were tested positive. Epidemiologists said that WHO had issued an alert in October [2016] after the chikungunya outbreak in India, but no preventive measures were taken at airports, railway stations, or the Pakistan-India border. Read More: http://www.promedmail.org/post/4727442

CAMPYLOBACTERIOSIS (UK): 21 Dec 2016, Six cases of *campylobacteriosis* have been linked to the consumption of unpasteurized (raw) milk at Low Sizergh Barn Farm, Kendal [South Lakeland, Cumbria]. South Lakeland District Council's (SLDC's) environmental health officers are supporting the investigation, which is being led by the Food Standards Agency (FSA). Inquiries are ongoing but experts believe the most likely cause of the outbreak is consumption of raw milk, probably from a vending machine on the site. *Campylobacter* is the most common cause of food poisoning in the UK. Read More: http://www.promedmail.org/post/4722872

RABIES (NEPAL): 29 Dec 2016, On 26 Dec 2016, a 49-year-old female presented to the outpatient department of Sukraraj Tropical and Infectious Disease Hospital (STIDH) with a monkey bite (at Pashupati temple) on her right hand. According to the patient, at least 40 people have been injured from monkeys (unprovoked) at Pashupati temple over the 2-day period (25-26 Dec 2016). Many of them were severely injured and were vaccinated against rabies virus. So far, the status of rabies virus infection in monkeys living in monkey temples in Nepal remains unknown. On average, approximately 3 to 5 monkey bite victims visit STIDH to seek medical care or advice each day. The Nepal government, however, does not provide rabies vaccines, especially to those who have been bitten or attacked by monkeys inside the premises of monkey temples (especially Pashupati and Shyambhunath Temple), despite recommendations by the WHO following monkey bite injuries. Read More: http://www.promedmail.org/post/4730904

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OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/ or follow us on Facebook at www.facebook.com/MarylandOPR.

More data and information on influenza can be found on the DHMH website:
http://phpa.dhmh.maryland.gov/influenza/fluwatch/Pages/Home.aspx

Please participate in the Maryland Resident Influenza Tracking System (MRITS): http://flusurvey.dhmh.maryland.gov

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail us. If you have information that is pertinent to this notification process, please send it to us to be included in the routine report.

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Appendix 1: ESSENCE Syndrome Definitions and Associated Category A Conditions

Syndrome	ESSENCE Definition	Category A Conditions
Botulism-like	(Botulism or (DifficultyFocusing and DifficultySpeaking) or (DifficultySpeaking and DifficultySwallowing) or (DifficultySwallowing and DifficultyFocusing) or DoubleVision or FacialParalysis or GuillainBarre or Ptosis) and not GeneralExclusions	Botulism
Fever	(Chills or (FeverPlus and (Drowsiness or Seizure)) or FeverOnly or SepsisGroup or ViralSyndrome) and not GeneralExclusions	N/A
Gastrointestinal	(AbdominalCramps or AbdominalPainGroup or Diarrhea or FoodPoisoning or Gastroenteritis or GIBleeding or Peritonitis or Vomiting) and not (GeneralExclusions or Gynecological or Obstetric or Reproductive or UrinaryTract)	Anthrax (gastrointestinal)
Hemorrhagic Illness	(FeverOrChills and (AcuteBloodAbnormalitiesGroup or BleedingFromMouth or BleedingGums or GIBleeding or Hematemesis or Hemoptysis or Nosebleed or Petechiae or Purpura)) and not GeneralExclusions	Viral Hemorrhagic Fever
Localized Lesion	(Boils or Bump or Carbuncle or DepressedUlcer or Eschar or Furuncle or InsectBite or SkinAbscess or (SkinSores and not AllOverBody) or SkinUlcer or SpiderBite) and not (GeneralExclusions or Decubitus or Diabetes or StasisUlcer)	Anthrax (cutaneous) Tularemia
Lymphadenitis	(BloodPoisoning or Bubo or CatScratchDisease or SwollenGlands) and not GeneralExclusions	Plague (bubonic)
Neurological	(([Age<75] and AlteredMentalStatus) or (FeverPlus and (Confusion or Drowsiness or Petechiae or StiffNeck)) or Delirium or Encephalitis or Meningitis or UnconsciousGroup) and not GeneralExclusions	N/A
Rash	(ChickenPox or Measles or RashGeneral or Roseola or (Rubella and not Pregnancy) or Shingles or (SkinSores and AllOverBody) or Smallpox) and not GeneralExclusions	Smallpox
Respiratory	(Anthrax or Bronchitis or (ChestPain and [Age<50]) or Cough or Croup or DifficultyBreathing or Hemothorax or Hypoxia or Influenza or Legionnaires or LowerRespiratoryInfection or Pleurisy or Pneumonia or RespiratoryDistress or RespiratoryFailure or RespiratorySyncytialVirus or RibPain or ShortnessOfBreath or Wheezing) and not (GeneralExclusions or Cardiac or (ChestPain and Musculoskeletal) or Hyperventilation or Pneumothorax)	Anthrax (inhalational) Tularemia Plague (pneumonic)
Severe Illness or Death	CardiacArrest or CodeGroup or DeathGroup or (Hypotension and FeverPlus) or RespiratoryArrest or SepsisGroup or Shock	N/A

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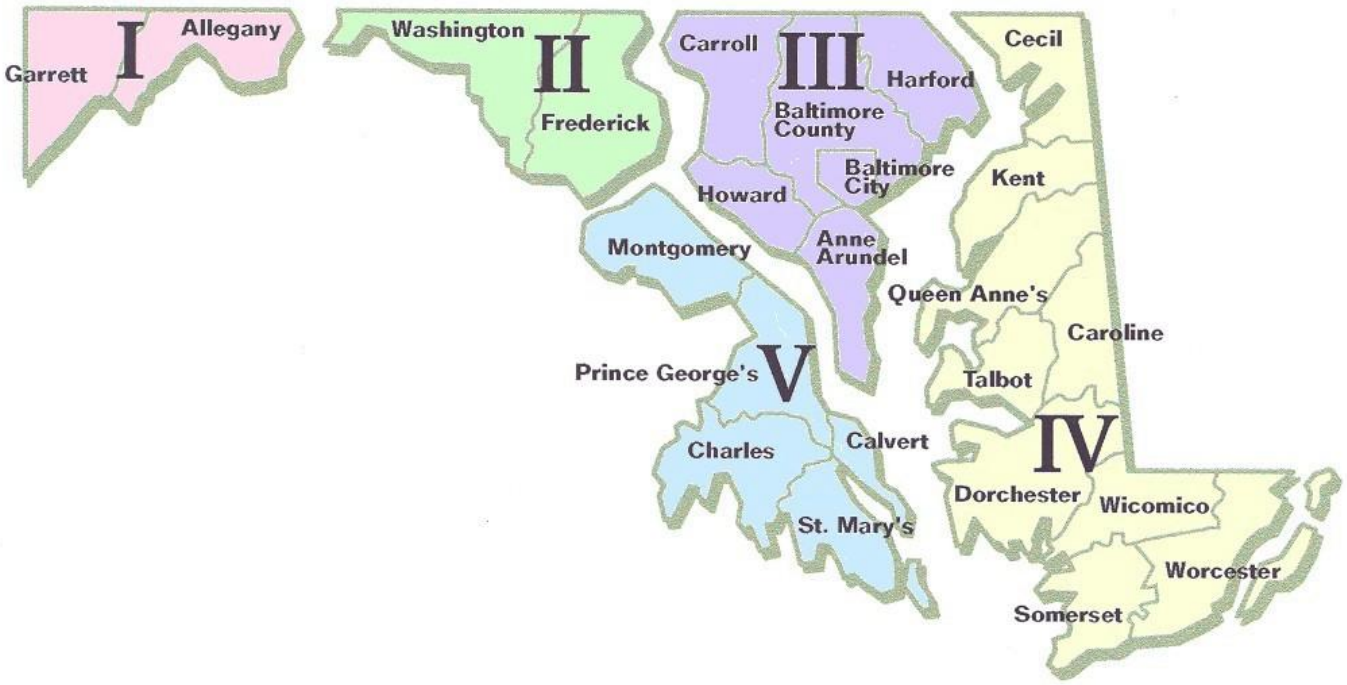
Appendix 2: Maryland Health and Medical Region Definitions

Health and Medical Region	Counties Reporting to ESSENCE
Regions 1 & 2	Allegany County Frederick County Garrett County Washington County
Region 3	Anne Arundel County Baltimore City Baltimore County Carroll County Harford County Howard County
Region 4	Caroline County Cecil County Dorchester County Kent County Queen Anne's County Somerset County Talbot County Wicomico County Worcester County
Region 5	Calvert County Charles County Montgomery County Prince George's County St. Mary's County



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